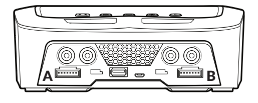
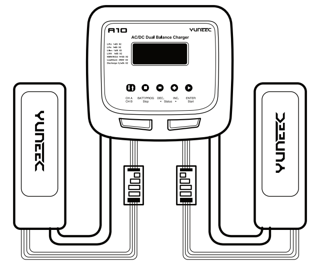
CHARGING THE LIPO FLIGHT BATTERY

Connecting to the power source : the A10 Dual Balance Charger comes with built in switching power supply. You can connect the AC power cord directly to the main AC socket (100 - 240V AC).



NOTE: While the A10 is connected to a suitable 100-240V AC power source, the combined power output for Channel A and Channel B is 200W, capable of charging two 6-Cell (6S), 4,000mAh LiPo battery packs at 4.3A.

Connecting the Battery



Button Descriptions

- **CH A / CH B:** Used to switch from Channel A to B or Channel B to A.
- **BATT PROG / STOP:** Used to stop the progress or go back to previous step/screen
- **DEC:** Used to go through the menus and decrease the parameter value
- **INC:** Used to go through the menus and increase the parameter value
- **ENTER / START:** Used to enter parameter or store parameter on screen.

Charging

BATT/PROGRAM Select: Press INC and DEC to go through all the programs and press START/ENTER to enter LiPo BATT Program.

Mode Select: Press INC and DEC to go through all the modes and press START/ENTER to enter LiPo Balance Charge Mode (for aircraft's flight battery), to enter Li-ion Balance Charge Mode (for ProAction ground handle).

Battery Setting: Press START/ENTER, the current value will start to blink, press INC and DEC to change the value and press START/ENTER to confirm your setting. For the TORNADO H920 battery, it is recommended to set 4A (no more than 8A). For SteadyGrip battery, it is recommended to set 2A (no more than 3A).

At the same time, the battery cells number will start blinking, press INC and DEC to change the value and press START/ENTER to confirm your setting. For the TORNADO H920 battery, 6S should be selected. For SteadyGrip, 4S should be selected.

Program Start: Press and hold START/ENTER for 3 seconds to start the program.
The charger is detecting the battery cell.

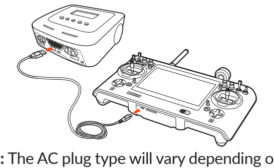
R:6SER S:6SER
CONFIRM(ENTER)

NOTE: R shows the number of cells detected by the charger and S is the number of cells set by you at the previous screen. If both numbers are not identical, press STOP to go back to previous screen to recheck the number of cells of the battery pack before going ahead.If both numbers are identical, press START/ENTER to start charging process.
If the number of cells do not match after double checking the connection, please contact technical support.

CHARGING THE ST24'S LI-ION BATTERY

You can charge the Li-ion battery installed in the ST24 with the A10 Dual Balance Charger. While the ST24 is powered off connect the cable to the USB adapter/charger, then plug it into the 5V/2.1A USB connector/charging port. The charging icon on the monitor of the ST24 shows the current charging progress of the transmitter battery and indicates that the battery is charging. It will take approximately 3 to 4 hours to charge a fully discharged (not over-discharged) battery.

NOTE: To check the charge status of the ST24, simply tap the screen 2 times.

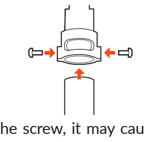


NOTE: The AC plug type will vary depending on the region in which the product was imported/purchased (AU = Australian; EU = European; UK = United Kingdom; US = United States).

ASSEMBLY

Installing the Landing Gear

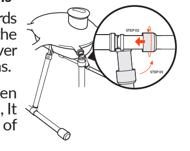
Insert the landing gear tube into the base which has already been connected to the H920. Secure the screws on both sides of base.



NOTE: Don't over tighten the screw, it may cause deformation of the landing gear.

Installing the Motor Arms

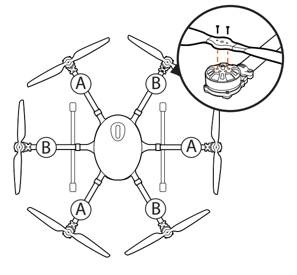
Fold the motor arms upwards and secure them using the straight knurled nut cover located on the motor arms.



NOTE: Don't over tighten the straight knurled nuts, It may cause deformation of the arms.

Installing the Propellers

Always ensure propellers are installed properly and with thread locker on the fasteners. The rotors of the YUNEEC TORNADO H920 are made of high-strength carbon fiber, the motors are extremely powerful, meaning that if the device is misused there is a risk of material damage, serious injury and even fatal injury.



Mount the propellers on the motors and note the pointers 'A' and 'B' given on the motor arms. This distinction between 'A' and 'B' refers to the rotation direction of the motors. The rotation direction of the motors must match the rotation direction of the propellers. Mount propeller 'A' on motor 'A' and propeller 'B' on motor 'B' and use the screws and screwdriver enclosed to carefully screw in the propellers.

IMPORTANT NOTE: If the propellers are installed in the wrong places, it may cause crash.

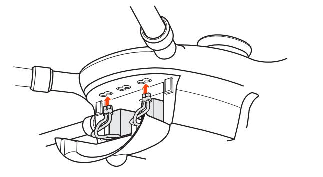
INSTALLING THE FLIGHT BATTERIES

After the flight battery has been fully charged, it's ready to be installed in the TORNADO H920:

STEP 1) Open the battery compartment flap with the status LED mounted on it by carefully pulling the top edge of the flap.

STEP 2) Slide the batteries into the compartment with the EC3 blue, polarity-protected connector leads / wires downward.

WARNING: The aircraft can take-off with 2 or 3 batteries. If utilizing 2 flight batteries, make sure the 2 batteries are placed evenly within the two sides to balance the aircraft.

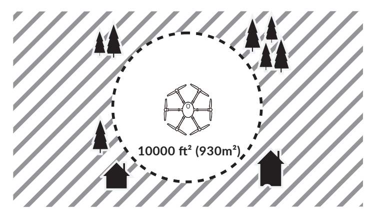


STEP 3) Connect the flight battery to the relevant socket above the respective battery on the H920 using the EC3 blue, polarity-protected connector.

NOTE: The white socket is for battery charging, do not connect it to any port when installing the batteries. If you do not install the battery in the correct orientation it will not be possible to make a positive connection.

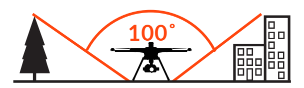
STEP 4) Close the battery door by pushing the area at the top to engage the latch/lock.

PLACEMENT BEFORE TAKEOFF

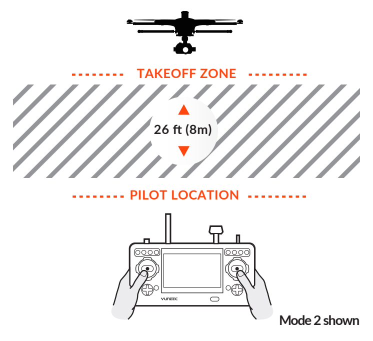


WARNING: Always operate the TORNADO H920 in open areas (approximately 10000 square feet/930 square meters or more) that are free from people, vehicles, trees and other obstructions. Never fly near or above crowds, airports or buildings.

Never attempt to operate TORNADO H920 nearby tall buildings/obstructions that do not offer a clear view of the sky (a minimum clearance of 100°).



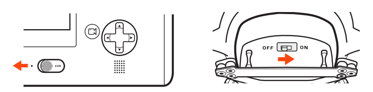
Be sure to place the TORNADO H920 on a level and stable surface before powering ON the Tornado H920 Aircraft and the ST24 Ground Station.



Step back approximately 26 ft (8 m) behind the TORNADO H920

POWERING ON/OFF

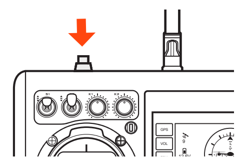
NOTE: ALWAYS turn on the ST24 and allow it to boot up BEFORE turning on the TORNADO H920 (and ALWAYS turn off the TORNADO H920 BEFORE turning off the ST24).



If the main LED status indicator flashes yellow, you will need to follow the compass calibration procedure. If the main LED status indicator is flashing blue, double check that the ST24 is powered on and set to the correct model memory. If the main LED status indicator is still flashing blue, please bind the aircraft to the ST24.

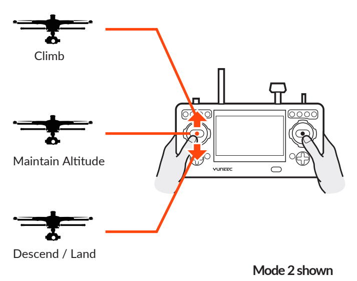
STARTING/STOPPING THE MOTORS

Step back approximately 26 feet (8 meters) behind the TORNADO H920. Press and hold the START/STOP button for about 3 seconds to start, and about 2 seconds to stop the motors.

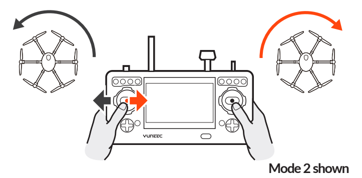


FLIGHT CONTROLS

To takeoff, slowly raise the left-hand stick to slightly above the center position. the TORNADO H920 will takeoff and climb slowly (or raise the stick further until it does). Allow the stick to return to the center position when the TORNADO H920 reaches the desired altitude.



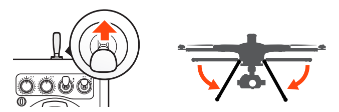
Take your time learning how the TORNADO H920 responds to various control inputs while flying. In Smart Mode the TORNADO H920 will always move in the direction the right-hand control stick is pushed relative to the pilot and no matter which way the front/nose is pointed. In Angle (Pilot) Mode the TORNADO H920 will move in the direction the control stick is pushed relative to the front/nose of the aircraft (and the 'angle' of movement is determined by how far you push the stick away from the center position).



Retracting and Lowering the Retractable Landing Gear

The TORNADO H920's landing gear is to keep it out of frame when a camera is attached. You can retract it by switching up the Landing Gear Switch on the top right side of the ST24. Make sure to flip the switch to the downward position when landing.

IMPORTANT NOTE: Always put down the landing gear before landing when the flight height is no less than 3m (10 feet) by switching down the Landing Gear Switch.



IMPORTANT NOTE: The joystick with the two control sticks respond proportionately, that means that the further you move the control stick from the centred resting point in the middle in one direction, the stronger the response and the faster the change in course.

IMPORTANT NOTE: The maximum height is restricted to 122m above the ground in Smart Mode and 122m (400 ft.) in Angle Mode. If at any time during flight you feel like the TORNADO H920 is drifting out of/beyond your control, simply release both control sticks. the TORNADO H920 will automatically self-level and will even hold its position (with a suitable GPS signal /lock) when both control sticks are centered. You can also activate Home Mode so the TORNADO H920 automatically flies itself back to the home point and lands.

Landing

Position the TORNADO H920 above the area where you would like to land. Slowly lower the left-hand stick to below the center position. the TORNADO H920 will descend slowly and land. After the TORNADO H920 lands, press and hold the START/STOP button for approximately two (2) seconds to stop the motors.

Activate Home Mode and the TORNADO H920 will automatically fly itself back to the home point and will land within a 26 feet (8 meter) diameter circle around it.

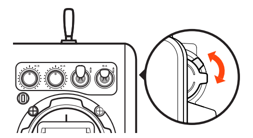
WARNING: Always land as soon as possible after the first level low voltage battery warning, or land immediately after the second level low voltage battery warning. And if at any time the Aircraft Battery Voltage shown on the screen is below 21.7 V, land the TORNADO H920 immediately.

AFTER LANDING

ALWAYS turn off the TORNADO H920 BEFORE turning off the ST24. Then remove the battery from the TORNADO H920 and allow it to cool to ambient/room temperature before recharging.

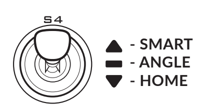
CONTROL RATE SLIDER

Set the overall climb/descend and directional control rates. Use the turtle position for the lowest control rates (best for cinematic video performance). Use the rabbit position for the highest control rates (best for capturing video of fast moving objects).



FLIGHT MODES

The ST24 is equipped with 3 different flight modes which can be selected using the mode switch in the top right corner above the right joystick.



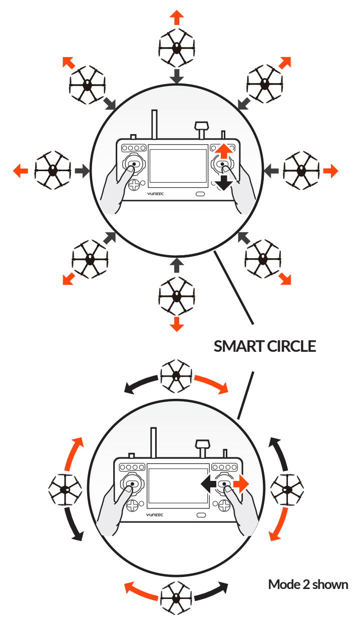
SMART MODE

If the mode switch '10' (S4) is fully up, then the H920 is in Smart Mode.
Although we recommend learning how to fly as fast as possible in Angle Mode, Smart Mode is the best choice for inexperienced pilots when test flying.

In Smart Mode, the H920 always flies in the direction in which the right joystick is moved by the pilot, regardless of the direction in which the nose is pointing. So if you move the stick to the right, the H920 will also move to the right regardless of the position of the nose, even if it is in the middle of turning. The mode can also be useful to pilots who have lost their bearings when flying in Angle Mode.

Additional Smart Mode Features:

SMART CIRCLE : In most cases the Smart Circle will keep the H920 approx. 8m / 26 ft. away from you provided you are positioned 8 m /26 ft. behind the H920.

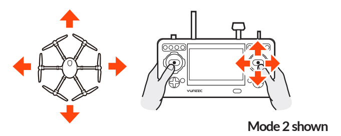


WARNING: Smart Mode only works if the H920 has an adequate GPS signal. If you lift off in Smart Mode and the H920 loses its GPS signal, then it will switch automatically to Angle Mode. That is why we explicitly recommend familiarising yourself with flying in Angle Mode as soon as possible. Otherwise, when the GPS signal is lost and you are unable to fly in Angle Mode, then there is a possibility that you may crash or that the H920 will fly away uncontrolled.

IMPORTANT NOTE: Accidental damage and "fly aways" are not covered by the guarantee.

ANGLE MODE

If the Mode switch '10' (S4) is in the centre position, then the H920 is in Angle Mode. Angle Mode is designed for pilots with a little experience (those who have already mastered Smart Mode), because in this mode the H920 moves in line with the joystick, in the direction in which the nose is pointed. So, if you move the right stick to the left, the H920 will tilt to the left and thus move to the left. That is assuming that the nose is pointing away from you. If the nose is pointing towards you, the H920 will move to the right from your point of view.



Extra Angle Mode features:

POSITION FREELY AND RETAIN ALTITUDE
The H920 will hold its position automatically
(if there is sufficient GPS signal) and it will retain the altitude level if the left stick is in the middle position.

WARNING: If you have not mastered the H920 in Angle Mode, accidents or "fly aways" may result.

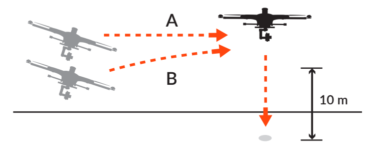
IMPORTANT NOTE: Accidental damage and "fly aways" are not covered by the warranty.

HOME MODE

In Home Mode the GPS system allows the Tornado H920 to automatically fly back in a straight line toward the direction of the last take-off position, and automatically land within 13-26 ft (4-8m) of the pilot. This can be very helpful for first-time pilots who aren't quite ready to land the TORNADO H920 themselves. It can also be helpful for pilots that lose orientation during flight; simply activate Home Mode until the TORNADO H920 automatically moves toward the home position, and once you've confirmed orientation switch back to Angle (Pilot) Mode. And if the TORNADO H920 ever loses the link with the ST24 it will automatically enter Home Mode.

When Home Mode is activated the TORNADO H920 will respond as follows:

A) When flying higher than 33 feet (10 meters) the TORNADO H920 will maintain the current altitude, fly back to the home point, or active home point if the ST24 has enough satellites for Follow Me, then descend vertically until it lands.
B) When flying lower than 33 feet (10 meters) the TORNADO H920 will climb to 33 feet (10 meters) while flying back to the home point, or active home position, then will descend vertically until it lands.



CAUTION: You must be certain there are no obstacles in the 'Return to Home' flight path otherwise the TORNADO H920 may come into contact with them and crash.

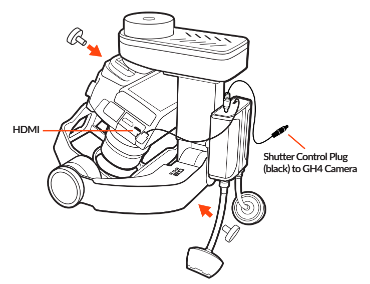
CAUTION: While the TORNADO H920 is in Home Mode you will have a limited amount of directional control. To help avoid obstacles we strongly recommend to switch to Smart or Angle Mode (then you can switch back to Home Mode).

WARNING: Home Mode only works when the TORNADO H920 has a suitable GPS signal/lock. If the TORNADO H920 loses GPS signal/lock it will switch to Angle (Pilot) Mode automatically. This is why we strongly recommend learning to fly in Angle (Pilot) Mode as soon as possible. Otherwise, if you lose GPS signal/lock and are not able to properly control the TORNADO H920 in Angle (Pilot) Mode the aircraft may crash or even 'fly away'.

IMPORTANT NOTE: Crash damage and 'fly aways' are NOT covered under warranty.

INSTALLING THE GB603 GIMBAL AND CAMERA

Step 1) Install the Fastening Block to the camera's flash mount.



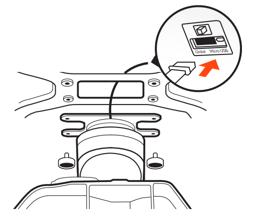
Step 2) Place the Camera Mount with lens frame downward, and fit the GH4 camera with its lens downward.

NOTICE: Make sure the Camera Battery is fully charged and the SD card is free of space.

Step 3) Secure the screw on the top and at the bottom of the frame to fix the camera on the Camera Mount.

Step 4) Insert the HDMI cable in the corresponding port on the camera (the right side of GH4) after connecting the Shutter cable in the port at the top left side of the camera through the frame.

IMPORTANT NOTE: Make sure the white plug connected to the port of LK58, and the black one is connected to the camera.

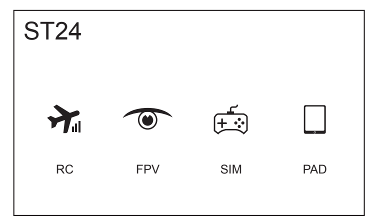


Connect the GB603 gimbal to the gimbal-/camera mount on the H920 by turning the 4 flat knurled quick disconnect nuts in a clockwise direction, tighten them until they feel secure.

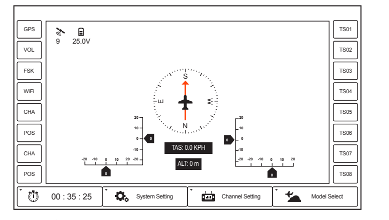
BINDING

The TORNADO H920 and ST24 have already been bound before leaving production, so there is no need to bind the aircraft to the ST24 if no gimbal is used. If the GB603 gimbal is to be attached to the aircraft, both the GB603 and TORNADO H920 need to be bound.

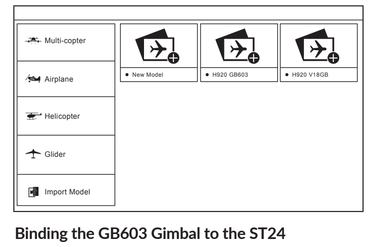
Binding the TORNADO H920 to the ST24


ST24

Step 1) Power on ST24, press ⮌ to go to the main interface. Choose FPV, and enter Model Select.



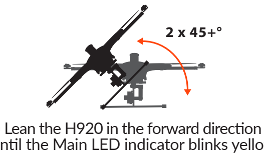
Step 2) The default Model type is Multi-copter, and choose the right configuration you are using H920 and GB603 or H920 and V18. Press OK when a pop-up window comes out.



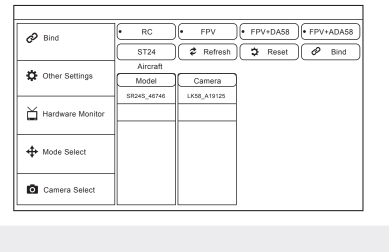
Binding the GB603 Gimbal to the ST24

Step 3) Press System Settings

Step 4) Switch on the TORNADO H920. Wait until the Main LED indicator blinks blue, that means the self-inspection of the H920 and GB603 is complete.



Step 5) Lean the H920 in the forward direction twice (45°), until the Main LED indicator blinks yellow.



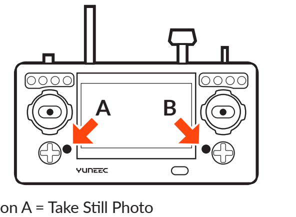
Step 6) Press Refresh, and the code of the H920 and LK58 will be shown on screen. Choose the right codes and press Bind.

Step 7) If it is the first time to bind your LK58 to the ST24, you need to insert the LK58 password: 87654321. Press OK on the pop-up window to continue.

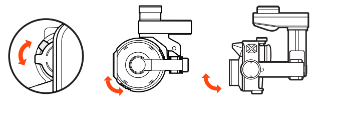
Step 8) Press Camera Select and choose Panasonic GH4. Press Select, then press OK.

NOTE: When you press ⮌, you will hear two long beeps. That means the binding is complete. The Real-time images can now be seen on the screen.

CAMERA CONTROLS (SINGLE MODE)



Button A = Take Still Photo
Button B = Start/Stop Recording Video



Gimbal Pitch Control (GB603 ONLY)

There is a gimbal pitch mode switch on ST24---S1. When the switch is in up/middle position, the gimbal/gimbal camera is in Angle Mode. Use the slider (C) on the left side of the ST24 to set the pitch/tilt position of the gimbal/gimbal camera. When the S1 is in bottom position, the gimbal/gimbal camera is in Velocity Mode. When the slider (C) is in the middle position, it means the velocity rate is 0 for the GB603, and it will stop pitching up/down. When the slider (C) is above the middle position, the GB603 will start pitching up. When the slider (C) is below the middle position, the GB603 will start pitching down. The distance between the slider(C) and the middle position decides the velocity rate, the further distance, the higer velocity it would be.

CAUTION: When V18 is mounted on TORNADO, the Velocity Mode is disabled, only angle mode can be used.

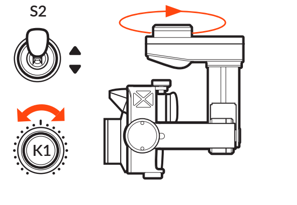
CAUTION: You MUST stop recording video in order to take still photos. It will take approximately 5 seconds to capture a still photo and before you can take another.

CAUTION: ALWAYS stop recording video before turning off the TORNADO H920/V18 to avoid data loss.

Camera/Gimbal Yaw Control

There is a gimbal yaw mode switch on ST24---S2. When the switch position is up and middle, the gimbal/gimbal camera is in Follow Mode. The yaw control of the gimbal/camera is now disabled. The gimbal/camera will adjust its yaw direction according to the aircraft's movements.

When the switch position is down, the gimbal/gimbal camera is in Global Mode. The Gimbal Yaw control knob (K1) is now activated. When the user rotates the knob in the right direction, the gimbal/gimbal camera will rotate to the right side, And vice versa.



THE FOLLOWING DOCUMENTS ARE AVAILABLE FOR DOWNLOAD AT

WWW.YUNEEC.COM/SUPPORT

- LED Status Indication Sheet
- Graphic User Interface
- Firmware Updates
- Tutorial Videos

Any information above might be changed due to the software update. For the latest documents, please check the official website.

SPECIFICATIONS

TORNADO H920

Air Time: 24 Minutes (H920/GB603/GH4/2pcs 6S 4,000mAh LiPo)
Dimension: 31.4x36.2x18.1in (797x920x461mm)
Diagonal Length Without Rotor Blades: 36.2 in(920mm)
Propeller/Main Rotor Diameter: 17.3 in (440mm)
Take-off Weight with GB603, GH4 Camera and Battery: 176.4 oz (5000g)

Battery: LiPo 6s 4000mAh 8C
Charger: 200W 2 x output AC-DC Balancing Charger
Transmitter: 24-channel 2.4GHz with 5.8GHz video downlink (included)

Flight Modes: Smart, Angle and Home Modes
Maximum Flying Height (Absolute altitude): 4000m (13124 ft)
Maximum Flying Height (Relative altitude): 122m (3281 ft)
Maximum Rotation Rate: 100°/s
Maximum Roll Angle: 35°
Maximum Horizontal Speed: 40km/h
Radio Control Frequency Band: 2.4GHz
Operating Temperature Range: – 10℃ to 50℃

ST24 PERSONAL GROUND STATION

Operating System: Android™
Number of Channels: 24
Control Transmission Distance/Range (Optimum Conditions): Max 2km
Robust Radio Control Modulation: Yuneec Protocol
Video link Frequency Band: 5.8GHz WiFi
Video Transmission Distance/Range (Optimum Conditions):
FCC Compliance: Up to 2000m
CE Compliance: Up to 1000m (984.252 ft)
Flight Systems Telemetry Data On Screen Display (OSD): Yes
LED Backlit LCD Screen: 7"
Tactile (Vibrating) and Audible Feedback: Yes
Built-In LiPo Battery Voltage / Capacity: 8700mah Li-ion 1s

N12891

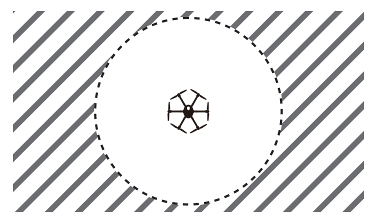
YUNEEC
ELECTRIC AVIATION

COMPASS CALIBRATION

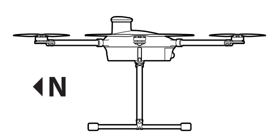
IMPORTANT NOTE: Calibration is not required. it is not needed unless they see flashing status LED.

NOTICE: In order to calibrate the compass in the YUNEEC TORNADO H920, we strongly recommend a team of 2 people to give the dimensions of the H920.

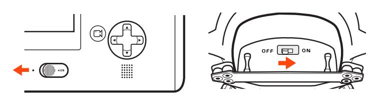
CAUTION: Do not calibrate the compass in parking garages, close to buildings or near roads with a metal core. For optimum performance, only calibrate the H920 in open spaces, far away from electrical lines and other metal structures or concrete buildings.



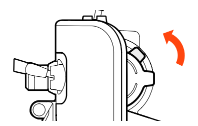
Step 1: Place the H920 on the flat and level surface and point it with its nose towards the north



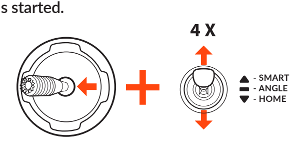
Power on the controller first and then the aircraft, and make sure they are connected correctly (If they are not connected correctly, the telemetry data will not display on the screen).



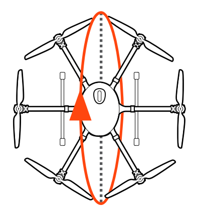
Move the Proportional Speed Control Rate Slider - located on the right side of the controller - to the highest position near the rabbit mode.



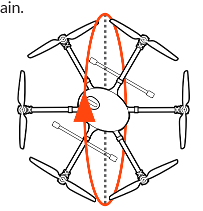
Hold rudder stick left while at the same time toggling the mode switch more than 4 times. If successful, ST24 will indicate compass calibration has started.



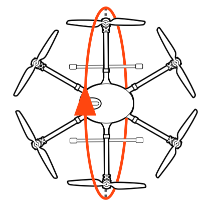
Step 1: Lift the H920 airframe straight & level, then point the nose towards the north and hold it in this position for 4 seconds. The LED status indicators will automatically start to flash red/green/blue quickly. Slowly turn the H920 forward and around 360 degrees (pitch axis) until it is flat again.



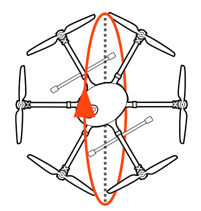
Step 2: Turn the H920 45° to the left and then turn it forward 360° again until it is lying flat in your hands again.



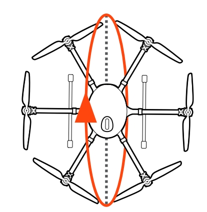
Step 3: Turn the H920 45° to the left and then turn it forward 360° again until it is lying flat.



Step 4: Turn the H920 45° to the left and then turn it forward 360° again until it is lying flat.

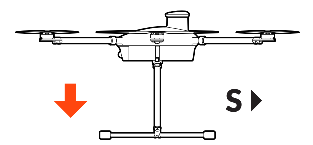


Step 5: Turn the H920 45° to the left and then turn it forward 360° again until it is lying flat.



Caution: Steps 1 to 5 should be completed within a time span of 30 seconds in order to achieve successful calibration.

Step 6: Place the H920 on the ground and wait a few seconds.



If the calibration has been successful, the LED status indicator lights up green continuously and the flight controller restarts, you will recognise this when you hear the acknowledgement tone, the same one you hear when you switch the system on.

IMPORTANT NOTE: If calibration has failed, the LED status indicator lights up red continuously and you must be repeat the calibration process. If the calibration should continue to fail, either the site of calibration is unsuitable or the compass is defective. Refer to your Yuneec service center.

DISCLAIMER

Yuneec Electric Aviation cannot be held liable for any damage, injury or for use of the product in violation with legal regulations, especially in the following circumstances:

Damage and/or injury as well violation of legal regulations resulting from a failure to comply with the operating instructions or the instructions at www.yuneec.com, product information, user manual and other legally binding information.

Damage and/or injury as well violation of legal regulations brought about by the influence of alcohol, drugs, medication or other narcotics which may impact on the concentration of the user. The same applies to illnesses effecting the concentration of the user (dizziness, tiredness, nausea etc.) or other factors compromising mental and physical capabilities.

Intentionally caused damage, injury or violation of legal regulations.

Any request for compensation caused by an accident resulting from use of the product.

Damage and/or injury as well as violation of legal regulations caused by use of the product in a no-fly zone, e.g. next to an airfield, above a motorway or a natural conservation area.

Malfunction of the product caused by retrofitting or replacement with components which did not come from Yuneec Electric Aviation.

Damage and/or injury caused by the use of replica parts (non-original parts).

Damage and/or injury as well as violation of legal regulations caused by incorrect operation or misjudgement.

Damage and/or injury caused by damaged spare parts or not using original Yuneec Electric Aviation spare parts.

Damage and/or injury as well as violation of legal regulations caused by ignoring the low voltage battery warning.

Damage and/or injury caused by knowingly and negligibly flying with a damaged model or one which is unfit to fly, e.g. due to dirt, water penetration, coarse particles, oil or a model which has not been correctly or completely assembled or if the main components exhibit visible damage, defects or missing parts.

Damage and/or injury as well as violation of legal regulations caused by operating the model in a magnetic field (e.g. high voltage lines, electricity/transformer stations, radio towers, mobile phone masts etc.), a strong wireless signal environment, no-fly zones, poor visibility and in the event of vision impairments or other impacts on the pilot which are left unchecked etc...

Damage and/or injury brought about through a violation of the legal regulations for operating the model, in unsuitable weather conditions, e.g. rain, wind, snow, hail, storms, hurricanes etc.

Damage and/or injury as well as violation of legal regulations caused by force majeure, e.g. collision, fire, explosion, flooding, tsunami, landslide, avalanche, earthquake or other forces of nature.

Damage and/or injury as well as violation of legal regulations caused by the illegal or immoral use of the model, e.g. capturing videos or recording data which infringes upon/harms the privacy of other people.

Damage and/or injury as well as violation of legal regulations caused by incorrect use of the batteries, protection systems, chargers or aircraft.

Consequential damage caused by the incorrect operation of any kind of system components and accessory parts, especially memory cards, whereby image or video material from the camera can become defect.

Any non-compliance with legal obligations, personal injury, material damage and environmental damage caused by use and a failure to comply with the local laws and regulations.

Damage and/or injury as well as violation of legal regulations caused by hazardous use without sufficient practical experience.

Damage and/or injury as well as violation of legal regulations caused by flying in legally defined no-fly zones.

Further losses which do not fall within the scope of use defined by Yuneec Electric Aviation as improper.

This product is designed for both professional use and personal, private use. The national and international laws and regulations in force as the time of take off must be adhered to.

The Use of This Product for the Following is Forbidden

1. Defamation, abuse, harassment, stalking, threatening or any other violation of the law (e.g. infringement upon the privacy or third parties and the public).
2. The photographing of private buildings or people beyond the strict rules of freedom of panorama, in their private environment or at home, without their express written consent; taking photographs in areas where taking pictures is prohibited or where you require a permit.
3. Use of this product for any illegal or inappropriate purposes outside of personal use (e.g. spying; military operations, illegal investigations or unauthorised investigations, or air transport);
4. Infringement upon or non-compliance with other applicable laws or regulations or immoral conduct.

Enquire beforehand as to whether you are allowed to take aerial shots in certain areas. Please note that copyright infringements could occur if capturing and copying photos and films of events, demonstrations, exhibitions or industrial property using a camera or another device, even if the video or images are intended for private use. Please also note that, in some countries, remote-control flying objects are generally prohibited at commercial events, especially if this is subject to the domiciliary rights of the organiser.

Yuneec Electric Aviation as well as all product names and brands which are used in these instructions are the registered trademarks of the respective owner. This product and its instructions are protected by copyright law and fall to Yuneec Electric Aviation. All rights reserved. These instructions may not be copied or reproduced in any form, wholly or in part, without the prior written consent of Yuneec Electric Aviation. It does not assume any liability for violations of patent law in relation to the use of the products or the information contained in these instructions.

Should you encounter problems while setting up the product which you cannot solve yourself, please contact your respective Yuneec Electric Aviation Service at www.yuneec.com.

GENERAL SAFETY PRECAUTIONS AND WARNINGS

Warning: Neglecting to use this product in the way stipulated in these operating instructions may result in damage to the product or personal property or cause serious injury. A remote-control multi-rotor copter is not a toy! Improper use can lead to serious injury and material damage.

Warning: As the user of this product, you alone are wholly responsible for proper product use which does not put you yourself or others at risk and which does not damage the property of others.

Always keep your hands, face and other body parts at a safe distance from the rotating propellers or other moving parts. Keep objects away which could collide with the propellers or which could get caught in them, e.g. debris, individual parts, tools or loose clothing, etc.

Always operate your aircraft in open spaces which are clear of people, vehicles or other obstacles. Never fly over large groups of people, close to airports or buildings.

In order to ensure proper operation and safe flying performance, never fly your aircraft near to buildings or other obstacles which prevent a clear view of the sky, thus compromising the GPS reception.

Do not attempt to operate the aircraft in areas where magnetic interference fields and / or wireless interference could occur, e.g. in areas near radio towers, power transmission stations, high-voltage lines, etc.

Always maintain the safety clearance in all directions from the aircraft in order to avoid collisions and/or injuries. This aircraft is controlled by a wireless signal which may be compromised by many potential sources which are outside of your control. Impairments can lead to a temporary loss of control.

In order to guarantee proper and safe use of the automatic landing function in 'Home' Mode, only switch your aircraft to Home Mode when it is in a position surrounded by at least 3 metres (approx. 10 ft.) of free and open space and note the need for sufficient GPS reception.

Do not attempt to start the aircraft if any components are damaged or worn. (includes, inter alia: damaged propellers/rotor blades, old batteries etc.)

Never operate your aircraft in poor or extreme weather conditions, this includes strong winds, rainfall, thunderstorms etc.

Always start operating your aircraft with a fully charged battery. Always land as soon as possible following the initial battery level warning or land immediately after the second battery level warning (indicated by vibration and audible warning tones of the transmitter or the Personal Ground Station as the case may be).

Only operate your aircraft if the voltage of the battery in the transmitter or the Personal Ground Station is within the safe range (indicated by the battery charge level symbol on the screen of the transmitter of the Personal Ground Station as the case may be).

Always keep the aircraft in view and under control. Leave the transmitter or the Personal Ground Station on as long as the aircraft is switched on.

Always pull the throttle stick right down and switch off the motors if the propellers/rotor blades come into contact with any objects.

Always leave all the components to cool down before touching them or flying again.

Please always remove the batteries after use and transport these separately and in line with the applicable guidelines.

Avoid water coming into contact with any electronic components, these parts are not suitable for use in contact with water. Moisture can damage the electronics.

Never put parts of the aircraft or its accessories in your mouth. This may lead to serious injury and even death.

Always keep small parts, electronic components and chemicals out of the reach of children.

Always follow the instructions and warnings in relation to all components, accessory parts, chargers and rechargeable batteries carefully.

CAUTION: The electronic speed controllers (ESCs) installed in the Yuneec the TORNADO H920 are not compatible with other products. And the YUNEEC the TORNADO H920 is not compatible with other ESCs. The use of other ESCs in the Yuneec the TORNADO H920 may lead to accidents which may result in defects in the Yuneec the TORNADO H920, damage to property or to your health or that of others.

FCC STATEMENT:

This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

RF EXPOSURE WARNING

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

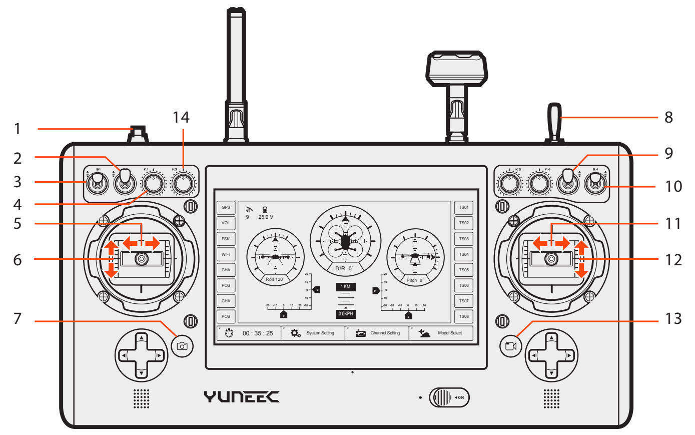
IC RADIATION EXPOSURE STATEMENT FOR CANADA

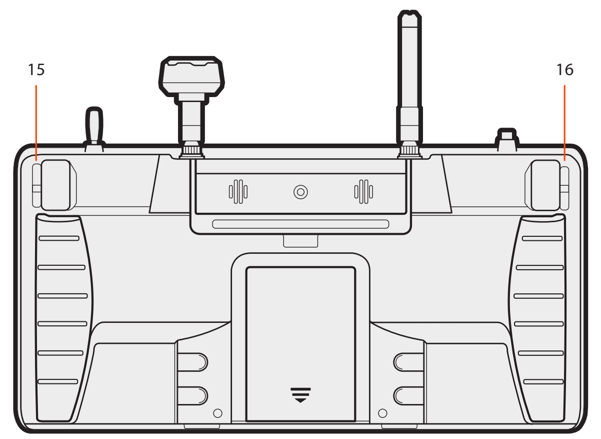
This device complies with Industry Canada licence-exempt RSS standard(s).
Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RSS-102 radiation exposure limit set forth for an uncontrolled environment.
Cet équipement respecte les limites d'exposition aux rayonnements IC définies pour un environnement non contrôlé

TORNADO
H920

USER MANUAL





GB603 SINGLE OPERATOR MODE

1 Motor Start/Stop Button
2 Gimbal Yaw Mode (Follow Mode/Global Mode)
3 Gimbal Pitch Mode (Angle Mode/ Velocity Mode)
4 Gimbal YAW Control
5 Rudder/Yaw Control (Mode 2 and Mode 1)
6 Throttle/Altitude Control (Mode 2)
  Elevator/pitch control (Mode 1)
7 Take Still Photo Button
8 Landing Gear Switch
9 GPS Switch
10 Flight Mode Selection Switch
11 Aileron/Roll Control (Mode 2 and Mode 1)
12 Elevator/Pitch Control (Mode 2)
  Throttle/Altitude Control (Mode 1)
13 Start/Stop Video Recording Button
15 Proportional Control Rate Slider
16 Gimbal Pitch Angle/Position Control Slider

GB603 TEAM MODE (Pilot)

1 Motor Start/Stop Button
5 Rudder/Yaw Control (Mode 2 and Mode 1)
6 Throttle/Altitude Control (Mode 2)
  Elevator/pitch control (Mode 1)
8 Landing Gear Switch
9 GPS Switch
10 Flight Mode Selection Switch
11 Aileron/Roll Control (Mode 2 and Mode 1)
12 Elevator/Pitch Control (Mode 2)
  Throttle/Altitude Control (Mode 1)
15 Proportional Control Rate Slider

GB603 TEAM MODE (Camera Man)

3 Gimbal Pitch Mode
7 Still Photo Button
10 Gimbal Yaw Mode
  FOLLOW (yaw can't be controlled)
  FOLLOW (yaw can becontrolled)
  Global
11 Gimbal Yaw control stick
12 Gimbal Pitch control stick (in Velocity mode)
13 Start/Stop Video Recording Button
16 Gimbal Pitch Angle/Position Control Slider in
  Gimbal PitchAngle mode

V18 SINGLE OPERATOR MODE

1 Motor Start/Stop Button
2 Global Yaw Mode (Follow Mode/Global Mode)
3 No use
4 GIMBAL YAW Control
5 Rudder/Yaw Control (Mode 2 and Mode 1)
6 Throttle/Altitude Control (Mode 2)
  Elevator/pitch control (Mode 1)
7 Take Still Photo Button
8 Landing Gear Switch
9 GPS Switch
10 Flight Mode Selection Switch
11 Aileron/Roll Control (Mode 2 and Mode 1)
12 Elevator/Pitch Control (Mode 2)
  Throttle/Altitude Control (Mode 1)
13 Start/Stop Video Recording Button
14 V18 Zoom In/Out Control Knob
15 Proportional Control Rate Slider
16 Gimbal Pitch Angle/Position Control Slider

V18 TEAM MODE (Pilot)

1 Motor Start/Stop Button
5 Rudder/Yaw Control (Mode 2 and Mode 1)
6 Throttle/Altitude Control (Mode 2)
  Elevator/pitch control (Mode 1)
8 Landing Gear Switch
9 GPS Switch
10 Flight Mode Selection Switch
11 Aileron/Roll Control (Mode 2 and Mode 1)
12 Elevator/Pitch Control (Mode 2)
  Throttle/Altitude Control (Mode 1)
15 Proportional Control Rate Slider

V18 TEAM MODE (Camera Man)

7 Take Still Photo Button
10 Gimbal Yaw Mode
  FOLLOW (yaw can't be controlled)
  FOLLOW (yaw can becontrolled)
  Global
11 Gimbal Yaw control stick
12 Gimbal Pitch control stick
13 Start/Stop Video Recording Button
16 V18 ZOOM